

**APPENDIX S**  
**DRAFT WASTE MANAGEMENT PLAN**

**ATTACHMENT S-3**  
**Order No. 97-043**  
**General NPDES Permit No. CAG994002**

**Water Quality Control Plan**  
**Ocean Waters of California**

**California Ocean Plan**

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State of California  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. 97-043  
GENERAL NPDES PERMIT NO. CAG994002

GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
AND  
WASTE DISCHARGE REQUIREMENTS  
FOR  
DISCHARGES OF TREATED GROUNDWATER FROM CONSTRUCTION  
AND PROJECT DEWATERING TO SURFACE WATERS  
IN  
COASTAL WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES  
(Threat/Complexity Rating 3-B)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), finds:

1. On September 22, 1989, the United States Environmental Protection Agency (USEPA) granted the State of California, hence the Regional Boards, the authority to issue general National Pollutant Discharge Elimination System (NPDES) permits pursuant to 40 Code of Federal Regulations (CFR) §122 and 123.
2. 40 CFR §122.28 provides for issuance of general permits to regulate a category of point sources if the sources:
  - a. Involve the same or substantially similar types of operations;
  - b. Discharge the same type of waste;
  - c. Require the same type of effluent limitations or operating conditions;
  - d. Require similar monitoring; and
  - e. Are more appropriately regulated under a general permit rather than individual permits.
3. General waste discharge requirements and NPDES permits enable Regional Board staff to expedite the processing of requirements, simplify the application process for dischargers, better utilize limited staff resources, and avoid the expense and time involved in repetitive public noticing, hearings, and permit adoptions.
4. 1991 revisions (which became effective in 1992) to Title 23 of the California Code of Regulations (CCR), Division 3, Chapter 9, Article 1, §2200, *Annual Fee Schedule*, requires that all discharges subject to a specific general permit shall pay the same annual fee based on Threat to Water Quality and Complexity of discharges regulated under the general permit.

Revised May 12, 1997

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5. On July 22, 1991, this Regional Board adopted Order No. 91-092 [General NPDES No. CAG990000] to regulate discharges of groundwater to surface waters in the region. This general permit was applicable to all groundwater discharges except those associated with groundwater cleanup. Depending on the Report of Waste Discharge, the Executive Officer<sup>1</sup> determined the annual fee based on the threat to water quality and complexity of the discharge. After the Annual Fee Schedule revisions (Finding 4), Order No. 91-092 has been used to regulate groundwater discharges that have a Threat to Water Quality of Category 3 and Complexity rating of C or a combined rating of 3-C. This Order is a reissuance of Order No. 91-092 with a rating of 3-B.
6. Discharges with a rating of 3-B contain pollutants that may degrade the water quality or cause a minor impairment of the designated beneficial uses of the receiving waters and will need treatment to meet the requirements prescribed in this Order. Groundwater contaminants may include oil, solids, salts, sewage, chemicals, and hydrocarbons at levels that will need treatment to comply with the requirements prescribed in this Order. The treatment system may include physical, chemical, and/or biological treatment.
7. Activities that result in discharges of groundwater covered by this general permit includes, but are not limited to, construction dewatering (including incidental collected stormwater), subterranean seepage dewatering, well development and test pumping, aquifer testing, and monitoring well construction. This Order is not applicable to groundwater discharges associated with soil and/or groundwater cleanups.
8. Pursuant to §2, Article X, California Constitution, and §275, Article 3, Porter-Cologne Water Quality Control Act (Water Code) on preventing waste and unreasonable use of waters of the state, this Regional Board encourages, wherever practical, water conservation and/or re-use of wastewater. To obtain coverage under this Order, the discharger shall first investigate the feasibility of conservation, land disposal and/or reuse of groundwater.
9. This Regional Board adopted *Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles* contained in Order No. 96-054 [NPDES No. CAS614001] and *Waste Discharge Requirements for Storm Water Management/Urban Runoff Discharges for Ventura County Flood Control District, County of Ventura, and the Cities of Ventura County* contained in Order No. 94-082 [NPDES No. CAS063339] on July 15, 1996, and June 22, 1994, respectively. These Orders prohibit nonstorm water discharges to storm drain systems unless they are covered by separate NPDES permits. This prohibition, in general, does not apply to rising groundwater, uncontaminated groundwater infiltration discharges, discharges

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<sup>1</sup> Any reference to Executive Officer in this Order means Executive Officer of this Regional Board.

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from potable water sources<sup>2</sup>, foundation and footing drains discharges, and water from crawl space pumps. The municipality may allow discharge of these type of discharges into the storm drain system. However, the municipality or the Regional Board may prohibit these discharges if they are determined to cause, or threaten to cause, degradation of water quality, violation of water quality objectives, cause nuisance and/or impair beneficial uses of receiving waters.

10. On August 15, 1996, the State Water Resources Control Board adopted a statewide general order and NPDES permit, *Waste Discharge Requirements for Discharges by Utility Companies to Surface Waters* [Order No. 96-12-DWQ, NPDES No. CAG990002]. Utility companies may have multiple discharges of small volumes of groundwater from utility vaults and other underground structures resulting from subterranean seepage. These discharges are covered by the statewide general order and permit unless it is determined, pursuant to provisions thereof, that these discharges are more appropriately regulated under Regional Board-issued permits.
11. On June 13, 1994, this Regional Board adopted a revised basin plan, *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. The plan incorporates, by reference, State Water Resources Control Board's Water Quality Control Plans and policies on ocean waters [*Water Quality Control Plan for Ocean Waters in California*, March 22, 1990], temperature [*Water Quality Control Plan for Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California*, amended September 18, 1975] and antidegradation [*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968].
12. The Basin Plan contains water quality objectives for, and lists the beneficial uses of, specific water bodies (receiving waters) in the Los Angeles Region. Typical beneficial uses include the following:
  - ▶ Above the estuary - municipal and domestic supply, industrial service and process supply, agricultural supply, groundwater recharge, freshwater replenishment, aquaculture, warm and cold freshwater habitats, inland saline water and wildlife habitats, water contact and noncontact recreation, fish migration, and fish spawning.
  - ▶ Within and below the estuary - industrial service supply, marine and wetland habitats, estuarine and wildlife habitats, water contact and noncontact recreation, commercial and sport fishing, aquaculture, migration of aquatic

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<sup>2</sup> Potable water sources means flows from drinking water storage, supply and distribution systems, including flows from system failures, pressure releases, system maintenance, well development, pump testing, fire hydrant flow testing; and flushing and dewatering of pipes, reservoirs, vaults, and wells.

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organisms, fish migration, fish spawning, preservation of rare and endangered species, preservation of biological habitats, and shellfish harvesting.

- ▶ Coastal Zones (both nearshore and offshore) - industrial service supply, navigation, water contact and noncontact recreation, commercial and sport fishing, marine habitat, wildlife habitat, fish migration and spawning, shellfish harvesting, and rare, threatened, or endangered species habitat.
13. This Regional Board has implemented a Watershed Management Approach (WMA) to address water quality protection in the region. The objective is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically-defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with resources available. This general permit and the accompanying Monitoring and Reporting Program aid in accomplishing the WMA. The Executive Officer may require the dischargers under this Order to participate in regional monitoring programs for the watershed where they are discharging.
  14. Effluent limitations and toxic and effluent standards established pursuant to §301, 302, 304, 306, and 307 of the Clean Water Act, as amended, are applicable to discharges under this Order.
  15. The requirements contained in this Order were established by considering, and are consistent with, all the water quality control policies, plans, and regulations mentioned above and, if they are met, will protect and maintain the beneficial uses of the receiving waters.
  16. The issuance of general waste discharge requirements for the above described discharges is exempt from the provisions of Chapter 3 (commencing with §21100, et. seq.), Division 13, Public Resources Code, pursuant to Water Code §13389. New discharges that will be authorized under this Order are not "new sources" as defined in 33 U.S.C. §306 and 40 CFR §122.2.

The Board has notified interested agencies, parties, and persons of its intent to issue general waste discharge requirements for discharges of treated groundwater from construction and project dewatering to surface waters and has provided them with an opportunity to submit their written views and recommendations.

The Board, in a public hearing, heard and considered all comments pertaining to the discharges to be regulated under this Order and to the tentative requirements.

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This Order shall serve as a general NPDES permit pursuant to §402 of the Clean Water Act, or amendments thereto, and shall take effect at the end of ten days from the date of its adoption provided the Regional Administrator, USEPA, has no objections.

IT IS HEREBY ORDERED that dischargers authorized under this Order and general permit, in order to meet the provisions contained in Division 7 of the California Water Code, and regulations adopted thereunder, and the provisions of the Federal Clean Water Act, and regulations and guidelines adopted thereunder, shall comply with the following:

A. ELIGIBILITY

1. Existing and future discharges of treated waste water to surface waters resulting from groundwater dewatering or seepage (including incidental collected stormwater); well construction, development, and/or testing; aquifer testing; and similar operations.
2. To be covered under this Order, discharges must meet the following criteria:
  - a. Pollutant concentrations in the discharge shall not cause violation of any applicable water quality objective for the receiving waters, including discharge prohibitions;
  - b. The discharge shall not cause acute nor chronic toxicity in receiving waters; and;
  - c. The discharge shall pass through an appropriate treatment system to meet the requirements of this Order.
3. New discharges and existing discharges regulated under existing individual permits and Order No. 91-092 which meet the eligibility criteria may be regulated under this Order.
4. For the purpose of renewal of existing individual NPDES permits with this general permit, provided that all the conditions of this general permit are met, renewal is effective upon issuance of a notification by the Executive Officer and issuance of a new monitoring program.
5. When an individual NPDES permit with more specific requirements is issued to a discharger, the applicability of this Order to that discharger is automatically terminated on the effective date of the individual permit.

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**B. AUTHORIZATION**

To be authorized to discharge under this Order, the discharger must submit a Report of Waste Discharge and an application for an NPDES permit (hereinafter Report of Waste Discharge) in accordance with the requirements of Part C of this Order. Upon receipt of the application, the Executive Officer shall determine the applicability of this Order to such a discharge. If the discharge is eligible, the Executive Officer shall notify the discharger that the discharge is authorized under the terms and conditions of this Order and prescribe an appropriate monitoring and reporting program. For new discharges, the discharge shall not commence until receipt of the Executive Officer's written determination.

**C. REPORT OF WASTE DISCHARGE**

**1. Deadline for Submission**

- a. Renewal of permits of existing dischargers covered under individual permits that meet the eligibility criteria in Part A and have submitted Reports of Waste Discharge will consist of a letter of determination from the Executive Officer of coverage under this Order.
- b. Existing dischargers covered under Order No. 91-092 will be sent a Notice of Intent (NOI) form that must be completed and returned to the Regional Board within 45 days of receipt; otherwise permit coverage will be revoked. However, instead of an NOI, the Executive Officer may require existing dischargers to submit a new Report of Waste Discharge, may revise their monitoring and reporting requirements, and/or may require them to participate in a regional monitoring program.
- c. New dischargers shall file a complete application at least 30 days before commencement of the discharge.

**2. Forms for Report of Waste Discharge**

- a. Dischargers shall use the appropriate USEPA Forms or equivalent forms approved by the Regional Board or the Executive Officer.
- b. The discharger, upon request, shall submit any additional information that the Executive Officer deems necessary to determine whether the discharge meets the criteria for coverage under this Order, and/or in prescribing an appropriate monitoring and reporting program.
- c. The Report of Waste Discharge shall include a feasibility study on reuse and/or alternative disposal methods of the groundwater.



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- d. The Report of Waste Discharge shall be accompanied by the first annual fee (if appropriate) in accordance with the *Annual Fee Schedule* for a discharge with a rating of 3-B. The check or money order shall be made payable to the "State Water Resources Control Board."

D. DISCHARGE PROHIBITIONS

1. The discharge of wastes other than those which meet eligibility requirements in Part A of this Order is prohibited unless the discharger obtains coverage under another general permit or an individual permit that regulates the discharge of such wastes.
2. The purposeful or knowing discharge of polychlorinated biphenyls (PCBs) is prohibited.
3. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

E. EFFLUENT LIMITATIONS

1. Discharge of an effluent in excess of the following limitations is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>Discharge Limitations</u>	
		<u>Monthly Average</u>	<u>Daily Maximum</u>
Total Suspended Solids	mg/L	50	150
Turbidity	NTU	50	150
BOD <sub>5</sub> 20°C	mg/L	20	30
Oil and Grease	mg/L	10	15
Settleable Solids	ml/L	0.1	0.3
Sulfides	mg/L	---	1.0
Phenols	mg/L	---	1.0
Phenolic Compounds (chlorinated)	µg/L	---	1.0
Residual Chlorine	mg/L	---	0.1
Detergents as Methylene Blue Active Substances (MBAS)	mg/L	---	0.5

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2. Discharge of an effluent in excess of the following limitations is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Daily Maximum</u>
Benzene	µg/L	1.0
Toluene	µg/L	150
Ethylbenzene	µg/L	700
Xylene	µg/L	1750
Ethylene Dibromide	µg/L	0.05
Carbon Tetrachloride	µg/L	0.5
Tetrachloroethylene	µg/L	5.0
Trichloroethylene	µg/L	5.0
1,4-dichlorobenzene	µg/L	5.0
1,1-dichloroethane	µg/L	5.0
1,2-dichloroethane	µg/L	0.5
1,1-dichloroethylene	µg/L	6.0
Vinyl Chloride	µg/L	0.5
Arsenic	µg/	50
Cadmium	µg/L	10
Chromium	µg/L	50
Copper	µg/L	1000
Lead	µg/L	50
Mercury	µg/L	2
Selenium	µg/L	10
Silver	µg/L	50
Total Petroleum Hydrocarbons	µg/L	100
Methyl Tertiary Butyl Ether (MTBE)	µg/L	35

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3. The pH of the discharge shall at all times be within the range of 6.0 and 9.0.
4. The temperature of the discharge shall not exceed 100°F.
5. The discharge of an effluent with mineral and nitrogen constituents in excess of applicable limits given in Attachment A is prohibited. In the letter of determination, the Executive Officer shall indicate the watershed/stream reach limitations in Attachment A applicable to the particular discharge.
6. Pass-through or uncontrollable discharges of PCBs shall not exceed daily average concentrations of 14 ng/L into fresh waters or 30 ng/L into estuarine waters.
7. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test less than 70% survival.
8. The discharge shall meet effluent limitations and toxic and effluent standards established pursuant to §301, 302, 304, 306, and 307 of the Clean Water Act, and amendments thereto.

F. RECEIVING WATER LIMITATIONS

1. The discharge shall not cause the following to be present in receiving waters:
  - a. Toxic pollutants at concentrations that will bioaccumulate in aquatic life to levels that are harmful to aquatic life or human health;
  - b. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses;
  - c. Chemical substances in amounts that adversely affect any designated beneficial use;
  - d. Visible floating materials, including solids, liquids, foams, and scum;
  - e. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water;

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- f. Suspended or settleable materials in concentrations that cause nuisance or adversely affect beneficial uses;
  - g. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses;
  - h. Substances that result in increases of BOD<sub>5</sub>20°C that adversely affect beneficial uses;
  - i. Fecal coliform concentrations which exceed a log mean of 200 per 100 ml (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10% of total samples during any 30-day period exceed 400 per 100 ml; and
  - j. Concentrations of toxic substances that are toxic to, or cause detrimental physiological responses in, human, animal, or aquatic life.
2. The discharge shall not cause the following to occur in the receiving waters:
- a. The dissolved oxygen to be depressed below:

WARM <sup>3</sup> designated waters	5 mg/L
COLD <sup>3</sup> designated waters	6 mg/L
COLD and SPWN <sup>3</sup> Designated waters	7 mg/L.
  - b. The pH to be depressed below 6.5 or raised above 8.5, and the ambient pH levels to be changed from natural conditions in inland waters more than 0.5 units or in estuaries more than 0.2 units;
  - c. The temperature at any time or place and within any given 24-hour period to be altered by more than 5°F above natural temperature; but at no time be raised above 80°F for waters with a beneficial use of WARM (Warm Freshwater Habitat);
  - d. The turbidity to increase to the extent that such an increase causes nuisance or adversely affects beneficial uses; such increase shall not exceed 20% when the natural turbidity is over 50 NTU or 10% when the natural turbidity is 50 NTU or less;

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<sup>3</sup> Beneficial Uses: WARM - Warm Freshwater Habitat; COLD - Cold Freshwater Habitat; SPWN - Spawning, Reproduction, and/or Early Development.

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- e. Residual chlorine in concentrations that persist and impairs beneficial uses; and,
  - f. Any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses or increase pesticide concentration in bottom sediments or aquatic life.
- 3. The discharge shall not alter the color, create a visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters.
  - 4. The discharge shall not degrade surface water communities and population including vertebrate, invertebrate, and plant species.
  - 5. The discharge shall not damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload their design capacity.
  - 6. The discharge shall not cause problems associated with breeding of mosquitos, gnats, black flies, midges, or other pests.

G. PROVISIONS

- 1. The Executive Officer may require any discharger authorized under this Order to apply for and obtain an individual NPDES permit with more specific requirements. The Executive Officer may require any discharger authorized to discharge under this permit to apply for an individual permit only if the discharger has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of the individual permit, the authority to discharge under this General Permit is no longer applicable.
- 2. Dischargers authorized under this Order shall maintain a copy of this Order at the waste disposal facility where it will be available at all times to operating personnel.
- 3. Prior to application, the discharger shall submit for Executive Officer's approval the list of chemicals and proprietary additives that may affect the discharge, including rates/quantities of application, compositions, characteristics, and material safety data sheets, if any.

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4. Oil or oily materials, chemicals, refuse, or other materials that may cause pollution in storm water and/or urban runoff shall not be stored or deposited in areas where they may be picked up by rainfall/urban runoff and discharged to surface waters. Any spill of such materials shall be contained, removed and cleaned immediately.
5. This Order neither exempt the discharger from compliance with any other laws, regulations, or ordinances that may be applicable, nor legalize the waste disposal facility.
6. The discharger shall allow the Regional Board and its authorized representatives entry to the premises to inspect and undertake any activity to determine compliance with this Order, or as otherwise authorized by the California Water Code.
7. The discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.
8. All applications, reports, or information submitted to the Regional Board shall be signed:
  - a. For corporations, by a principal executive officer at least of the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;
  - b. For a partnership, by a general partner;
  - c. For a sole proprietorship, by the proprietor;
  - d. For a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
9. Pursuant to 40CFR §122.61(b), coverage under this Order may be transferred in case of change of ownership of land or discharge facility provided the existing discharger notifies the Executive Officer at least 30 days before the proposed transfer date, and the notice includes a written agreement between the existing and new dischargers containing a specific date of transfer of coverage, responsibility for compliance with this Order, and liability between them.
10. Pursuant to 40CFR §122.62 and 122.63, this Order may be modified, revoked and reissued, or terminated for cause. Reasons for modification may include

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new information on the impact of discharges regulated under this Order become available, promulgation of new effluent standards and/or regulations, adoption of new policies and/or water quality objectives, and/or new judicial decisions affecting requirements of this Order,

11. Any discharge authorized under this Order may request to be excluded from coverage of this Order by applying for an individual permit.

H. MONITORING AND REPORTING REQUIREMENTS

1. The Executive Officer is hereby authorized to prescribe a Monitoring and Reporting Program for each authorized discharger. This program may include participation of the discharger in a regional monitoring program.
2. The discharger shall retain records of all monitoring information and data used to complete the Report of Waste Discharge and application for coverage under this Order for at least five years from the date of sampling, measurement, report, or application. The retention period shall be extended during any unresolved litigation regarding the discharge or when requested by the Executive Officer.
3. The discharger shall maintain all sampling, measurement and analytical results, including: the date, exact place, and time of sampling or measurement; individual(s) who did the sampling or measurement; the date(s) analyses were done; analysts' names; and analytical techniques or methods used.
4. All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR §136, unless other test procedures have been specified in this Order or by the Executive Officer.
5. All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or other state agency authorized to undertake such certification.
6. The discharger shall calibrate and maintain all monitoring instruments and equipment to insure accuracy of measurements, or shall insure that both activities will be conducted.
7. For parameters/constituents where both monthly average and daily maximum limits are prescribed, but where monitoring frequency is less than four times a month, the following procedure shall apply:

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If analysis of a sample yields a result greater than the monthly average limit for a parameter/constituent, the sampling frequency for that parameter/constituent shall increase to weekly within one week of receiving the laboratory result until at least four consecutive weekly samples are obtained and compliance with the monthly average has been demonstrated, and the discharger has submitted for Executive Officer approval a program that will ensure future compliance with the monthly average limit.

I. REPORTING REQUIREMENTS

1. The discharger shall file with the Regional Board (Attention: Technical Support Unit) technical reports on self-monitoring work conducted according to the Monitoring and Reporting Program specified by the Executive Officer and submit other reports as requested by the Regional Board.
2. In reporting the monitoring data, the discharger shall arrange the data in tabular form so that the date, constituents, and concentrations are readily discernible. The data shall be summarized to demonstrate compliance with waste discharge requirements.
3. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.
4. Each monitoring report must contain an affirmation in writing that:

"All analyses were conducted at a laboratory certified for such analyses by \_\_\_\_\_ and in accordance with current USEPA procedures or as specified in this Monitoring Program."

5. Each report shall contain the following completed declaration:

"I declare under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system or those directly responsible for gathering the information, the information submitted, is, to the best of



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my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Executed on the \_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
(Signature)  
(Title)"

6. Whenever wastes, associated with the discharge under this Order, are transported to a different disposal site, the following shall be reported in the monitoring report: type and quantity of wastes; name and address of the hauler (or method of transport if other than by hauling); and location of the final point(s) of disposal.
7. The discharger shall file a report of any material change or proposed change in the character, location or volume of the discharge.
8. The discharger shall notify this Regional Board within 24 hours by telephone of any adverse condition resulting from the discharge, such notification shall be affirmed in writing within five working days.

J. COMPLIANCE AND ENFORCEMENT

1. The discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act and the Water Code and is subject to enforcement action and/or permit termination.
2. The Clean Water Act and the Water Code provide for civil and criminal penalties for violations of waste discharge requirements.

K. EXPIRATION DATE AND CONTINUATION OF THIS ORDER

This Order expires on April 10, 2002; however, for those dischargers authorized to discharge under this Order, it shall continue in full force and effect until a new order is adopted.

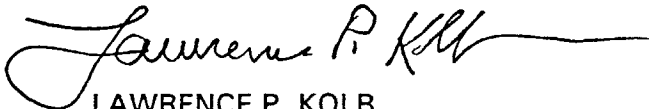
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L. REAUTHORIZATION

Upon reissuance of a new general permit order, dischargers authorized under this Order shall file a Notice of Intent or a new Report of Waste Discharge within 45 days of notification by the Executive Officer.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on May 12, 1997.

A handwritten signature in cursive script, reading "Lawrence P. Kolb", followed by a horizontal line.

LAWRENCE P. KOLB  
Acting Executive Officer

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ATTACHMENT A

Discharge of wastewater within a watershed/stream reach with constituent concentrations in excess of the following daily maximum limits is prohibited:

WATERSHED/STREAM REACH	TDS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Boron* (mg/L)	Nitrogen** (mg/L)
1. <u>Miscellaneous Ventura Coastal Streams:</u>		no waterbody specific limits			
2. <u>Ventura River Watershed:</u>					
a. Above Camino Cielo Road	700	300	50	1.0	5
b. Between Camino Cielo Road and Casitas Vista Road	800	300	60	1.0	5
c. Between Casitas Vista Road and confluence with Weldon Canyon	1000	300	60	1.0	5
d. Between confluence with Weldon Canyon and Main Street	1500	500	300	1.5	10
e. Between Main St. and Ventura River Estuary		no waterbody specific limits			
3. <u>Santa Clara River Watershed:</u>					
a. Above Lang gaging station	500	100	50	0.5	5
b. Between Lang gaging station and Bouquet Canyon Road Bridge	800	150	100	1.0	5
c. Between Bouquet Canyon Road Bridge and West Pier Highway 99	1000	300	100	1.5	10
d. Between West Pier Highway 99 and Blue Cut gaging station	1000	400	100	1.5	5
e. Between Blue Cut gaging station and A Street, Fillmore	1300	600	100	1.5	5
f. Between A Street, Fillmore and Freeman Diversion "Dam" near Saticoy	1300	650	80	1.5	5
g. Between Freeman Diversion "Dam" near Saticoy and Highway 101 Bridge	1200	600	150	1.5	---
h. Between Highway 101 Bridge and Santa Clara River Estuary		no waterbody specific limits			
i. Santa Paula Creek above Santa Paula Water Works Diversion Dam	600	250	45	1.0	5
j. Sespe Creek above gaging station, 500 feet downstream from Little Sespe Creek	800	320	60	1.5	5
k. Piru Creek above gaging station below Santa Felicia Dam	800	400	60	1.0	5
4. <u>Calleguas Creek Watershed:</u>					
a. Above Potrero Road	850	250	150	1.0	10
b. Below Potrero Road		no waterbody specific limits			
5. <u>Miscellaneous Los Angeles County Coastal Streams:</u>					
a. Malibu Creek Watershed:	2000	500	500	2.0	10
b. Ballona Creek Watershed:		no waterbody specific limits			
6. <u>Dominguez Channel Watershed:</u>		no waterbody specific limits			
7. <u>Los Angeles River Watershed:</u>					
a. Los Angeles River and Tributaries - upstream of Sepulveda Flood Control Basin	950	300	150	---	8
b. Los Angeles River - between Sepulveda Flood Control Basin and Figueroa Street. Includes Burbank Western Channel only.	950	300	190	---	8
c. Other tributaries to Los Angeles River - between Sepulveda Flood Control Basin and Figueroa Street	950	300	150	---	8
d. Los Angeles River - between Figueroa Street and L. A. River Estuary (Willow Street). Includes Rio Hondo below Santa Ana Freeway	1500	350	190	---	8
e. Other tributaries to Los Angeles River - between Figueroa Street and Los Angeles River Estuary. Includes Arroyo Seco downstream of spreading grounds.	1550	350	150	---	8

DISCHARGES OF TREATED GROUNDWATER  
FROM CONSTRUCTION AND PROJECT  
DEWATERING TO SURFACE WATERS

Order No. 97-043  
CAG994002(3-B)

ATTACHMENT A  
(Continued)

WATERSHED/STREAM REACH	TDS (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Boron* (mg/L)	Nitrogen** (mg/L)
7. <u>Los Angeles River Watershed (continued):</u>					
f. Rio Hondo - between Whittier Narrows Flood Control Basin and Santa Ana Freeway	750	300	180	---	8
g. Rio Hondo - upstream of Whittier Narrows Flood Control Basin	750	300	150	---	8
h. Santa Anita Creek above Santa Anita spreading grounds	250	30	10	---	---
i. Eaton Canyon Creek above Eaton Dam	250	30	10	---	---
j. Arroyo Seco above spreading grounds	300	40	15	---	---
k. Big Tujunga Creek above Hansen Dam	350	50	20	---	---
l. Pacoima Wash above Pacoima spreading grounds	250	30	10	---	---
8. <u>San Gabriel River Watershed:</u>					
a. San Gabriel River above Morris Dam	250	30	10	0.6	2
b. San Gabriel River between Morris Dam and Ramona Blvd.	450	100	100	0.5	8
c. San Gabriel River and tributaries - between Ramona Blvd. and Valley Blvd.	750	300	150	1.0	8
d. San Gabriel River - between Valley Blvd. and Firestone Blvd. Includes Whittier Narrows Flood Control Basin and San Jose Creek - downstream of 71 Freeway only.	750	300	180	1.0	8
e. San Jose Creek and tributaries - upstream of 71 Freeway	750	300	150	1.0	8
f. San Gabriel River - between Firestone Blvd. and San Gabriel River Estuary (downstream from Willow Street). Includes Coyote Creek.		no waterbody specific limits			
g. All other minor San Gabriel Mountain streams tributary to San Gabriel Valley	300	40	15	---	---
9. <u>Los Angeles Harbor/ Long Beach Harbor Watershed</u>		no waterbody specific limits			
10. <u>Santa Ana River Watershed</u>					
a. San Antonio Creek***	225	25	---	---	---
b. Chino Creek***	---	---	---	---	---
11. <u>Island Watercourses:</u>					
a. Anacapa Island		no waterbody specific limits			
b. San Nicolas Island		no waterbody specific limits			
c. Santa Barbara island		no waterbody specific limits			
d. Santa Catalina Island		no waterbody specific limits			
e. San Clemente Island		no waterbody specific limits			

\* Where naturally occurring boron results in concentrations higher than the stated limit, a site-specific limit may be determined on a case-by-case basis.

\*\* Nitrate-nitrogen plus nitrite-nitrogen (NO<sub>3</sub>-N + NO<sub>2</sub>-N). The lack of adequate nitrogen data for all streams precluded the establishment of numerical limits for all streams.

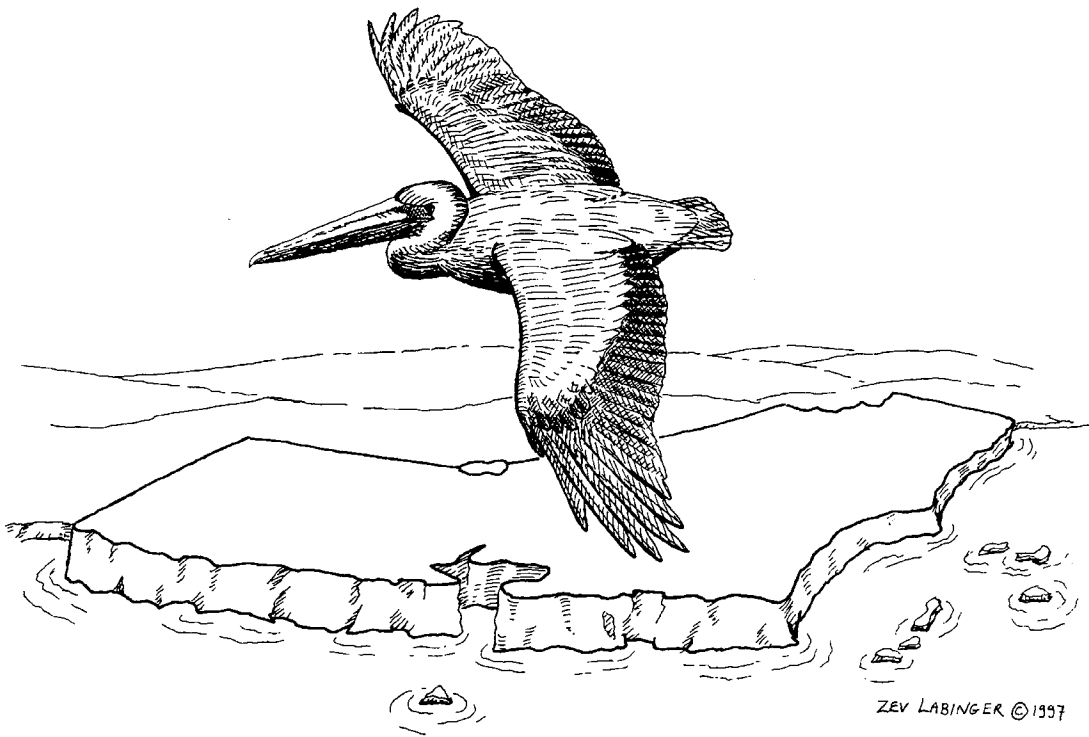
\*\*\* These watercourses are primarily located in the Santa Ana Region. The water quality objectives for these streams have been established by the Santa Ana Regional Board. Dashed lines indicate that numerical objectives have not been established, however, narrative objectives shall apply. Refer to the Santa Ana Region Basin Plan for more details.

# **WATER QUALITY CONTROL PLAN**

## **OCEAN WATERS OF CALIFORNIA**



# **CALIFORNIA OCEAN PLAN**



**1997**

**STATE WATER RESOURCES CONTROL BOARD  
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY**











**State of California**

*Pete Wilson, Governor*

**California Environmental Protection Agency**

*Peter M. Rooney, Secretary*

**State Water Resources  
Control Board**

*P.O. Box 100*

*Sacramento, CA 95812-0100*

*(916) 657-1247*

*John Caffrey, Chairman*

*James M. Stubchaer, Vice Chair*

*Mary Jane Forster, Member*

*Marc Del Piero, Member*

*John W. Brown, Member*

*Walt Pettit, Executive Director*

*Dale Claypoole, Deputy Director*

Cover drawing by:  
Zev Labinger, 1997







State of California  
STATE WATER RESOURCES CONTROL BOARD

1997

**CALIFORNIA OCEAN PLAN**

WATER QUALITY CONTROL PLAN

OCEAN WATERS OF CALIFORNIA

Effective July 23, 1997



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STATE WATER RESOURCES CONTROL BOARD  
RESOLUTION NO. 97-026

ADOPTION OF AN AMENDMENT TO THE  
WATER QUALITY CONTROL PLAN FOR  
OCEAN WATERS OF CALIFORNIA

WHEREAS:

1. The Water Quality Control Plan for Ocean Waters of California (Ocean Plan) was adopted by the State Water Resources Control Board (SWRCB) in 1972 and amended in 1978, 1983, 1988 and 1990.
2. The SWRCB is responsible for reviewing Ocean Plan water quality standards and for modifying and adopting standards in accordance with Section 303(c)(1) of the Federal Clean Water Act and Section 13170.2 of the California Water Code (CWC).
3. The SWRCB initiated a public review of the Ocean Plan in 1991, including a public hearing, and adopted a workplan in 1992 for considering issues identified in the comments received.
4. The SWRCB staff reviewed the higher priority issues, selected several for analysis in accordance with the workplan, and is now proposing amendments to the Ocean Plan based on two of these selected issues.
5. The proposed amendments consist of:
  - a. Revision of the current Ocean Plan list of critical life stage protocols used in testing the toxicity of waste discharges.
  - b. Minor changes in terminology to make the Ocean Plan easier to understand and implement.
6. The SWRCB prepared and circulated a draft Functional Equivalent Document in accordance with provisions of the California Environmental Quality Act and Title 14, California Code of Regulations 15251(g).
7. The SWRCB held a public hearing in Sacramento, California on August 23, 1995 and has carefully considered all testimony and comments received on this matter and has determined that the adoption of the proposed Ocean Plan amendments will not have a significant adverse effect on the environment.
8. The SWRCB staff has prepared a final draft of the Functional Equivalent Document, Attachment "A" to this resolution, which includes the specific proposed amendments to the Ocean Plan, responses to the comments received, and a progress report on the other issues identified in the 1992 workplan.
9. The SWRCB has considered relevant management agency agreements in accordance with CWC Section 13170.1.



10. The SWRCB consulted with the Department of Fish and Game (DFG) on the potential impacts of the amendments on fish and wildlife resources, including threatened or endangered species. The DFG found that the proposed amendments will not jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of such species.
11. Amendments to SWRCB Water Quality Control Plans do not become effective until regulatory provisions are approved by the Office of Administrative Law (OAL).

THEREFORE BE IT RESOLVED THAT:

The SWRCB:

1. Approves the proposed amendments to the Ocean Plan, as described in Attachment "A", which will:
  - a. Revise the current Ocean Plan list of critical life stage protocols used in testing the toxicity of waste discharges.
  - b. Make minor changes in terminology to make the Ocean Plan easier to understand and implement.
2. Approves the draft final Functional Equivalent Document, identified as Attachment "A" to this resolution, which includes the responses to comments received and a progress report on other issues related to the Ocean Plan.
3. Agrees that within three years after DFG notifies the SWRCB that specific water bodies support threatened or endangered species and that scientific evidence indicates that certain existing water quality objectives for these water bodies do not adequately protect such species, the SWRCB shall determine whether these objectives are adequately protective. In cases where such existing objectives do not provide adequate protection for threatened and endangered species, the SWRCB shall develop and adopt adequately protective site-specific objectives for these constituents.
4. Authorizes the SWRCB Executive Director to sign the Certificate of Fee Exemption identified as Attachment "B" to this resolution.
5. Authorizes the SWRCB staff to submit the approved amended Ocean Plan to the U.S. Environmental Protection Agency and the OAL for their approval.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on March 20, 1997.

/s/

Maureen Marché

Administrative Assistant to the Board



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# **CALIFORNIA OCEAN PLAN**

## **WATER QUALITY CONTROL PLAN FOR OCEAN WATERS OF CALIFORNIA**

### **INTRODUCTION**

In furtherance of legislative policy set forth in Section 13000 of Division 7 of the California Water Code (Stats. 1969, Chap. 482) pursuant to the authority contained in Section 13170 and 13170.2 (Stats. 1971, Chap. 1288) the State Water Resources Control Board hereby finds and declares that protection of the quality of the ocean\* waters for use and enjoyment by the people of the State requires control of the discharge of waste\* to ocean\* waters in accordance with the provisions contained herein. The Board finds further that this plan shall be reviewed at least every three years to guarantee that the current standards are adequate and are not allowing degradation\* to marine species or posing a threat to public health.

This plan is applicable, in its entirety, to point source discharges to the ocean\*. Nonpoint sources of waste\* discharges to the ocean\* are subject to Chapter I - Beneficial Uses, Chapter II - Water Quality Objectives, Chapter III -General Requirements, Chapter IV - Table B (wherein compliance with water quality objectives shall, in all cases, be determined by direct measurements in the receiving waters) and Chapter V - Discharge Prohibitions.

This plan is not applicable to discharges to enclosed\* bays and estuaries\* or inland waters nor is it applicable to vessel wastes, or the control of dredging spoil.

Provisions regulating the thermal aspects of waste\* discharged to the ocean\* are set forth in the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed\* Bays and Estuaries\* of California.

### **Chapter I BENEFICIAL USES**

The beneficial uses of the ocean\* waters of the State that shall be protected include industrial water supply, water contact and non-contact recreation, including aesthetic enjoyment, navigation, commercial and sport fishing, mariculture, preservation and enhancement of Areas of Special Biological Significance, rare and endangered species, marine habitat, fish migration, fish spawning and shellfish\* harvesting.

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\* See Appendix I for definition of terms.



## Chapter II WATER QUALITY OBJECTIVES

This chapter sets forth limits or levels of water quality characteristics for ocean\* waters to ensure the reasonable protection of beneficial uses and the prevention of nuisance. The discharge of waste\* shall not cause violation of these objectives.

The Water Quality Objectives and Effluent Limitations are defined by a statistical distribution when appropriate. This method recognizes the normally occurring variations in treatment efficiency and sampling and analytical techniques and does not condone poor operating practices.

Compliance with the water quality objectives of this chapter shall be determined from samples collected at stations representative of the area within the waste field where initial\* dilution is completed.

### A. Bacterial Characteristics

#### 1. Water-Contact Standards

Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board, but including all kelp\* beds, the following bacterial objectives shall be maintained throughout the water column:

- a. Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).
- b. The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

The "Initial\* Dilution Zone" of wastewater outfalls shall be excluded from designation as "kelp\* beds" for purposes of bacterial standards, and Regional Boards should recommend extension of such exclusion zone where warranted to the SWRCB (for consideration under Chapter VI.F.). Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp\* beds for purposes of bacterial standards.

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\* See Appendix I for definition of terms.



## 2. Shellfish\* Harvesting Standards

At all areas where shellfish\* may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

### B. Bacterial Assessment and Remedial Action Requirements

The requirements listed below shall be used to 1) determine the occurrence and extent of any impairment of a beneficial use due to bacterial contamination; 2) generate information which can be used in the development of an enterococcus standard; and 3) provide the basis for remedial actions necessary to minimize or eliminate any impairment of a beneficial use.

Measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliforms are required. In addition to the requirements of Section II.A.1., if a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period, the Regional Board shall require the appropriate agency to conduct a survey to determine if that agency's discharge is the source of the contamination. The geometric mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval. When a sanitary survey identifies a controllable source of indicator organisms associated with a discharge of sewage, the Regional Board shall take action to control the source.

Waste discharge requirements shall require the discharger to conduct sanitary surveys when so directed by the Regional Board. Waste discharge requirements shall contain provisions requiring the discharger to control any controllable discharges identified in a sanitary survey.

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\* See Appendix I for definition of terms.



C. Physical Characteristics

1. Floating particulates and grease and oil shall not be visible.
2. The discharge of waste\* shall not cause aesthetically undesirable discoloration of the ocean\* surface.
3. Natural\* light shall not be significantly\* reduced at any point outside the initial\* dilution zone as the result of the discharge of waste\*.
4. The rate of deposition of inert solids and the characteristics of inert solids in ocean\* sediments shall not be changed such that benthic communities are degraded\*.

D. Chemical Characteristics

1. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste\* materials.
2. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
3. The dissolved sulfide concentration of waters in and near sediments shall not be significantly\* increased above that present under natural conditions.
4. The concentration of substances set forth in Chapter IV, Table B, in marine sediments shall not be increased to levels which would degrade\* indigenous biota.
5. The concentration of organic materials in marine sediments shall not be increased to levels which would degrade\* marine life.
6. Nutrient materials shall not cause objectionable aquatic growths or degrade\* indigenous biota.

E. Biological Characteristics

1. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded\*.
2. The natural taste, odor, and color of fish, shellfish\*, or other marine resources used for human consumption shall not be altered.
3. The concentration of organic materials in fish, shellfish\* or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

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\* See Appendix I for definition of terms.





F. Radioactivity

1. Discharge of radioactive waste\* shall not degrade\* marine life.

Chapter III  
GENERAL REQUIREMENTS FOR MANAGEMENT OF  
WASTE\* DISCHARGE TO THE OCEAN\*

- A. Waste\* management systems that discharge to the ocean\* must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.
- B. Waste discharged\* to the ocean\* must be essentially free of:
  1. Material that is floatable or will become floatable upon discharge.
  2. Settleable material or substances that may form sediments which will degrade\* benthic communities or other aquatic life.
  3. Substances which will accumulate to toxic levels in marine waters, sediments or biota.
  4. Substances that significantly\* decrease the natural\* light to benthic communities and other marine life.
  5. Materials that result in aesthetically undesirable discoloration of the ocean\* surface.
- C. Waste\* effluents shall be discharged in a manner which provides sufficient initial\* dilution to minimize the concentrations of substances not removed in the treatment.
- D. Location of waste\* discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:
  1. Pathogenic organisms and viruses are not present in areas where shellfish\* are harvested for human consumption or in areas used for swimming or other body-contact sports.
  2. Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.
  3. Maximum protection is provided to the marine environment.

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\* See Appendix I for definition of terms.



Waste\* that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing\* and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

#### Chapter IV QUALITY REQUIREMENTS FOR WASTE\* DISCHARGES (EFFLUENT LIMITATIONS)

This chapter sets forth the quality requirements for waste\* discharge to the ocean\*.

Table A effluent limitations apply only to publicly owned treatment works and industrial discharges for which Effluent Limitations Guidelines have not been established pursuant to Sections 301, 302, 304, or 306 of the Federal Clean Water Act.

Table B water quality objectives apply to all discharges within the jurisdiction of this plan.

Table A effluent limitations, and effluent concentrations calculated from Table B water quality objectives, shall apply to a discharger's total effluent, of whatever origin (i.e., gross, not net, discharge), except where otherwise specified in this Plan.

The SWRCB is authorized to administer and enforce effluent limitations established pursuant to the Federal Clean Water Act. Effluent limitations established under Sections 301, 302, 306, 307, 316, 403, and 405 of the aforementioned Federal Act and administrative procedures pertaining thereto, are included in this plan by reference. Compliance with Table A effluent limitations, or Environmental Protection Agency Effluent Limitations Guidelines for industrial discharges, based on Best Practicable Control Technology, shall be the minimum level of treatment acceptable under this plan, and shall define reasonable treatment and waste control technology.

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\* See Appendix I for definition of terms.



TABLE A  
EFFLUENT LIMITATIONS

	<u>Unit of Measurement</u>	<u>Limiting Concentrations</u>		
		<u>Monthly (30-day Average)</u>	<u>Weekly (7-day Average)</u>	<u>Maximum at any time</u>
Grease and Oil	mg/l	25	40	75
Suspended Solids			see below+	
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	units		within limits of 6.0 to 9.0 at all times	
Acute* Toxicity	TUa	1.5	2.0	2.5

+Suspended Solids: Dischargers shall, as a 30-day average, remove 75% of suspended solids from the influent stream before discharging wastewaters to the ocean\*, except that the effluent limitation to be met shall not be lower than 60 mg/l. Regional Boards may recommend that the SWRCB (Chapter VI.F.), with the concurrence of the Environmental Protection Agency, adjust the lower effluent concentration limit (the 60 mg/l above) to suit the environmental and effluent characteristics of the discharge. As a further consideration in making such recommendation for adjustment, Regional Boards should evaluate effects on existing and potential water\* reclamation projects.

If the lower effluent concentration limit is adjusted, the discharger shall remove 75% of suspended solids from the influent stream at any time the influent concentration exceeds four times such adjusted effluent limit.

Effluent limitations shall be imposed in a manner prescribed by the SWRCB such that the concentrations set forth below as water quality objectives shall not be exceeded in the receiving water upon completion of initial\* dilution, except that objectives indicated for radioactivity shall apply directly to the undiluted waste\* effluent.

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\* See Appendix I for definition of terms.



**TABLE B**  
**WATER QUALITY OBJECTIVES**

	Limiting Concentrations			
	Units of <u>Measurement</u>	6-Month <u>Median</u>	Daily <u>Maximum</u>	Instantaneous <u>Maximum</u>
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic	µg/l	8	32	80
Cadmium	µg/l	1	4	10
Chromium (Hexavalent) (see below, a)	µg/l	2	8	20
Copper	µg/l	3	12	30
Lead	µg/l	2	8	20
Mercury	µg/l	0.04	0.16	0.4
Nickel	µg/l	5	20	50
Selenium	µg/l	15	60	150
Silver	µg/l	0.7	2.8	7
Zinc	µg/l	20	80	200
Cyanide (see below, b)	µg/l	1	4	10
Total Chlorine Residual (For intermittent chlorine sources, see below, c)	µg/l	2	8	60
Ammonia (expressed as nitrogen)	µg/l	600	2400	6000
Chronic* Toxicity	TUc		1	
Phenolic Compounds (non-chlorinated)	µg/l	30	120	300
Chlorinated Phenolics	µg/l	1	4	10
Endosulfan	µg/l	0.009	0.018	0.027
Endrin	µg/l	0.002	0.004	0.006
HCH*	µg/l	0.004	0.008	0.012
Radioactivity				

Not to exceed limits specified in Title 17, Division 1, Chapter 5,  
Subchapter 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.

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\* See Appendix I for definition of terms.





Table B Continued

<u>Chemical</u>	<u>30-day Average (µg/l)</u>	
	<u>Decimal Notation</u>	<u>Scientific Notation</u>
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS		
acrolein	220	$2.2 \times 10^2$
antimony	1,200	$1.2 \times 10^3$
bis(2-chloroethoxy) methane	4.4	$4.4 \times 10^0$
bis(2-chloroisopropyl) ether	1,200	$1.2 \times 10^3$
chlorobenzene	570	$5.7 \times 10^2$
chromium (III)	190,000	$1.9 \times 10^5$
di-n-butyl phthalate	3,500	$3.5 \times 10^3$
dichlorobenzenes*	5,100	$5.1 \times 10^3$
1,1-dichloroethylene	7,100	$7.1 \times 10^3$
diethyl phthalate	33,000	$3.3 \times 10^4$
dimethyl phthalate	820,000	$8.2 \times 10^5$
4,6-dinitro-2-methylphenol	220	$2.2 \times 10^2$
2,4-dinitrophenol	4.0	$4.0 \times 10^0$
ethylbenzene	4,100	$4.1 \times 10^3$
fluoranthene	15	$1.5 \times 10^1$
hexachlorocyclopentadiene	58	$5.8 \times 10^1$
isophorone	150,000	$1.5 \times 10^5$
nitrobenzene	4.9	$4.9 \times 10^0$
thallium	14	$1.4 \times 10^1$
toluene	85,000	$8.5 \times 10^4$
1,1,2,2-tetrachloroethane	1,200	$1.2 \times 10^3$
tributyltin	0.0014	$1.4 \times 10^{-3}$
1,1,1-trichloroethane	540,000	$5.4 \times 10^5$
1,1,2-trichloroethane	43,000	$4.3 \times 10^4$

OBJECTIVES FOR PROTECTION OF HUMAN HEALTH -- CARCINOGENS

acrylonitrile	0.10	$1.0 \times 10^{-1}$
aldrin	0.000022	$2.2 \times 10^{-5}$
benzene	5.9	$5.9 \times 10^0$
benzidine	0.000069	$6.9 \times 10^{-5}$
beryllium	0.033	$3.3 \times 10^{-2}$
bis(2-chloroethyl) ether	0.045	$4.5 \times 10^{-2}$
bis(2-ethylhexyl) phthalate	3.5	$3.5 \times 10^0$
carbon tetrachloride	0.90	$9.0 \times 10^{-1}$
chlordane*	0.000023	$2.3 \times 10^{-5}$
chloroform	130	$1.3 \times 10^2$
DDT*	0.00017	$1.7 \times 10^{-4}$
1,4-dichlorobenzene	18	$1.8 \times 10^1$
3,3'-dichlorobenzidine	0.0081	$8.1 \times 10^{-3}$

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\* See Appendix I for definition of terms.



Table B Continued

<u>Chemical</u>	<u>30-day Average (µg/l)</u>	
	<u>Decimal Notation</u>	<u>Scientific Notation</u>
1,2-dichloroethane	130	$1.3 \times 10^2$
dichloromethane	450	$4.5 \times 10^2$
1,3-dichloropropene	8.9	$8.9 \times 10^0$
dieldrin	0.00004	$4.0 \times 10^{-5}$
2,4-dinitrotoluene	2.6	$2.6 \times 10^0$
1,2-diphenylhydrazine	0.16	$1.6 \times 10^{-1}$
halomethanes*	130	$1.3 \times 10^2$
heptachlor*	0.00072	$7.2 \times 10^{-4}$
hexachlorobenzene	0.00021	$2.1 \times 10^{-4}$
hexachlorobutadiene	14	$1.4 \times 10^1$
hexachloroethane	2.5	$2.5 \times 10^0$
N-nitrosodimethylamine	7.3	$7.3 \times 10^0$
N-nitrosodiphenylamine	2.5	$2.5 \times 10^0$
PAHs*	0.0088	$8.8 \times 10^{-3}$
PCBs*	0.000019	$1.9 \times 10^{-5}$
TCDD equivalents*	0.0000000039	$3.9 \times 10^{-9}$
tetrachloroethylene	99	$9.9 \times 10^1$
toxaphene	0.00021	$2.1 \times 10^{-4}$
trichloroethylene	27	$2.7 \times 10^1$
2,4,6-trichlorophenol	0.29	$2.9 \times 10^{-1}$
vinyl chloride	36	$3.6 \times 10^1$

- a) Dischargers may at their option meet this objective as a total chromium objective.
- b) If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by Standard Methods 412F, G, and H (Standard Methods for the Examination of Water and Wastewater. Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation. Most recent edition.).
- c) Water quality objectives for total chlorine residual applying to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

$$\log y = -0.43 (\log x) + 1.8$$

where: y = the water quality objective (in µg/l) to apply when chlorine is being discharged;  
x = the duration of uninterrupted chlorine discharge in minutes.

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\* See Appendix I for definition of terms.



## Implementation Provisions for Table B

### A. Calculation of Effluent Limitations

Effluent limitations for water quality objectives listed in Table B, with the exception of radioactivity, shall be determined through the use of the following equation:

$$C_e = C_o + D_m (C_o - C_s) \quad (1)$$

where:

- $C_e$  = the effluent concentration limit,
- $C_o$  = the concentration (water quality objective) to be met at the completion of initial\* dilution,
- $C_s$  = background seawater concentration (see Table C below),
- $D_m$  = minimum probable initial\* dilution expressed as parts seawater per part wastewater.

For the purpose of this Plan, minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates shall be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents, of sufficient strength to influence the initial dilution process, flow across the discharge structure.

The Executive Director of the SWRCB shall identify standard dilution models for use in determining  $D_m$ , and shall assist the Regional Board in evaluating  $D_m$  for specific waste discharger. Dischargers may propose alternative methods of calculating  $D_m$ , and the Regional Board may accept such method upon verification of its accuracy and applicability.

TABLE C  
BACKGROUND SEAWATER CONCENTRATIONS ( $C_s$ )

<u>Waste Constituent</u>	<u><math>C_s</math> (<math>\mu\text{g/l}</math>)</u>
Arsenic	3
Copper	2
Mercury	0.0005
Silver	0.16
Zinc	8

For all other Table B parameters,  $C_s = 0$ .

The six-month median shall apply as a moving median of daily values for any 180 day period in which daily values represent flow weighted average concentrations within a

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\* See Appendix I for definition of terms.



24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.

The daily maximum shall apply to flow weighted 24 hour composite samples.

The instantaneous maximum shall apply to grab sample determinations.

If only one sample is collected during the time period associated with the water quality objective (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

Discharge requirements shall also specify effluent limitations in terms of mass emission rate limits utilizing the general formula:

$$\text{lbs/day} = 8.34 \times C_e \times Q \quad (2)$$

The six-month median limit on daily mass emissions shall be determined using the six-month median effluent concentration as  $C_e$  and the observed flow rate  $Q$  in millions of gallons per day. The daily maximum mass emission shall be determined using the daily maximum effluent concentration limit as  $C_e$  and the observed flow rate  $Q$  in millions of gallons per day.

Any significant change in waste\* flow shall be cause for reevaluating effluent limitations.

## B. Compliance Determination

All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Compliance based on a single sample analysis should be determined where appropriate as described below.

When a calculated effluent limitation is greater than or equal to the PQL\*, compliance shall be determined based on the calculated effluent limitation and either single or multiple sample analyses.

When the calculated effluent limitation is below the PQL\*, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL\*.

When the calculated effluent limitation is below the PQL\*, and recurrent analytical responses between the PQL\* and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples. Sufficient sampling and analysis shall be required to determine compliance.

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\* See Appendix I for definition of terms.





Published values for MDL\*s and PQL\*s should be used except where revised MDL\*s and PQL\*s are available from recent laboratory performance evaluations, in which case the revised MDL\*s and PQL\*s should be used. Where published values are not available the Regional Boards should determine appropriate values based on available information.

If a discharger believes the sample matrix under consideration in the waste discharge requirements is sufficiently different from that used for an established MDL\* value, the discharger may demonstrate to the satisfaction of the Regional Board what the appropriate MDL\* should be for the discharger's matrix. In this case the PQL\* shall be established at the limit of quantitation (equal to 10 standard deviations above the average measured blank used for development of the MDL\* in the discharger's matrix).

When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs) concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL\* for that parameter.

Due to the large total volume of powerplant and other heat exchange discharges, special procedures must be applied for determining compliance with Table B objectives on a routine basis. Effluent concentration values ( $C_e$ ) shall be determined through the use of equation 1 considering the minimal probable initial\* dilution of the combined effluent (in-plant waste streams plus cooling water flow). These concentration values shall then be converted to mass emission limitations as indicated in equation 2. The mass emission limits will then serve as requirements applied to all inplant waste\* streams taken together which discharge into the cooling water flow, except that limits for total chlorine residual, chronic\* toxicity and instantaneous maximum concentrations in Table B shall apply to, and be measured in, the combined final effluent, as adjusted for dilution with ocean water. The Table B objective for radioactivity shall apply to the undiluted combined final effluent.

### C. Toxicity Reduction Requirements

If a discharge consistently exceeds an effluent limitation based on a toxicity objective in Table B, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source of toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.

The following shall be incorporated into waste discharge requirements: (1) a requirement to conduct a TRE if the discharge consistently exceeds its toxicity effluent limitation, and (2) a provision requiring a discharger to take all reasonable steps to reduce toxicity once the source of toxicity is identified.

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\* See Appendix I for definition of terms.



## Chapter V DISCHARGE PROHIBITIONS

### A. Hazardous Substances

The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste\* into the ocean\* is prohibited.

### B. Areas of Special Biological Significance

Waste\* shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

### C. Sludge

Pipeline discharge of sludge to the ocean\* is prohibited by federal law; the discharge of municipal and industrial waste\* sludge directly to the ocean\*, or into a waste\* stream that discharges to the ocean\*, is prohibited by this Plan. The discharge of sludge digester supernatant directly to the ocean\*, or to a waste\* stream that discharges to the ocean\* without further treatment, is prohibited.

It is the policy of the SWRCB that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment. Therefore, if federal law is amended to permit such discharge, which could affect California waters, the SWRCB may consider requests for exceptions to this section under Chapter VI, F. of this Plan, provided further that an Environmental Impact Report on the proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project.

### D. By-Passing

The by-passing of untreated wastes\* containing concentrations of pollutants in excess of those of Table A or Table B to the ocean\* is prohibited.

## Chapter VI GENERAL PROVISIONS

### A. Effective Date

This Plan is in effect as of the date of approval by the Office of Administrative Law (OAL).

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\* See Appendix I for definition of terms.



## B. Waste Discharge Requirements

The Regional Boards may establish more restrictive water quality objectives and effluent limitations than those set forth in this Plan as necessary for the protection of beneficial uses of ocean\* waters.

Regional Boards may impose alternative less restrictive provisions than those contained within Table B of the Plan, provided an applicant can demonstrate that:

Reasonable control technologies (including source control, material substitution, treatment and dispersion) will not provide for complete compliance; or

Any less stringent provisions would encourage water\* reclamation;

Provided further that:

- a) Any alternative water quality objectives shall be below the conservative estimate of chronic toxicity, as given in Table D below, and such alternative will provide for adequate protection of the marine environment;
- b) A receiving water quality toxicity\* objective of 1 TUc is not exceeded; and
- c) The State Board grants an exception (Chapter VI.F.) to the Table B limits as established in the

Regional Board findings and alternative limits.

TABLE D  
CONSERVATIVE ESTIMATES OF CHRONIC TOXICITY

<u>Constituent</u>	<u>Estimate of Chronic Toxicity (<math>\mu\text{g/l}</math>)</u>
Arsenic	19
Cadmium	8
Hexavalent Chromium	18
Copper	5
Lead	22
Mercury	0.4
Nickel	48
Silver	3
Zinc	51
Cyanide	10
Total Chlorine Residual	10.0
Ammonia	4000.0
Phenolic Compounds (non-chlorinated)	a) (see below)
Chlorinated Phenolics	a)
Chlorinated Pesticides and PCB's	b)

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\* See Appendix I for definition of terms.



- a. There is insufficient data for phenolics to estimate chronic toxicity levels. Requests for modification of water quality objectives for these waste\* constituents must be supported by chronic toxicity data for representative sensitive species. In such cases, applicants seeking modification of water quality objectives should consult the Regional Water Quality Control Board to determine the species and test conditions necessary to evaluate chronic effects.
- b. Limitations on chlorinated pesticides and PCB's shall not be modified so that the total of these compounds is increased above the objectives in Table B.

C. Revision of Waste\* Discharge Requirements

The Regional Board shall revise the waste\* discharge requirements for existing discharges as necessary to achieve compliance with this Plan and shall also establish a time schedule for such compliance.

D. Monitoring Program

The Regional Boards shall require dischargers to conduct self-monitoring programs and submit reports necessary to determine compliance with the waste\* discharge requirements, and may require dischargers to contract with agencies or persons acceptable to the Regional Board to provide monitoring reports. Monitoring provisions contained in waste discharge requirements shall be in accordance with the Monitoring Procedures provided in Appendix II.

Where the Regional Board is satisfied that any substance(s) of Table B will not significantly occur in a discharger's effluent, the Regional Board may elect not to require monitoring for such substance(s), provided the discharger submits periodic certification that such substance(s) are not added to the waste\* stream, and that no change has occurred in activities that could cause such substance(s) to be present in the waste\* stream. Such election does not relieve the discharger from the requirement to meet the objectives of Table B.

The Regional Board may require monitoring of bioaccumulation of toxicants in the discharge zone. Organisms and techniques for such monitoring shall be chosen by the Regional Board on the basis of demonstrated value in waste\* discharge monitoring.

E. Areas of Special Biological Significance

Areas of special biological significance shall be designated by the SWRCB after a public hearing by the Regional Board and review of its recommendations.

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\* See Appendix I for definition of terms.





F. State Board Exceptions to Plan Requirements

The State Board may, in compliance with the California Environmental Quality Act, subsequent to a public hearing, and with the concurrence of the Environmental Protection Agency, grant exceptions where the Board determines:

1. The exception will not compromise protection of ocean\* waters for beneficial uses, and
2. The public interest will be served.

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\* See Appendix I for definition of terms.



## APPENDIX I

### DEFINITION OF TERMS

#### ACUTE TOXICITY

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

$TUa = 100/96\text{-hr LC } 50\%$

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard test species. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log(100 - S)}{1.7}$$

S = percentage survival in 100% waste. If  $S > 99$ , TUa shall be reported as zero.

CHLORDANE shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

CHRONIC TOXICITY: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

$TUc = 100/NOEL$

b. No Observed Effect Level (NOEL)

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\* See Appendix I for definition of terms.



The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Appendix II.

DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

DEGRADE: Degradation shall be determined by comparison of the waste field and reference site(s) for characteristics species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

DICHLOROBENZENES shall mean the sum of 1,2- and 1,3-dichlorobenzene.

ENCLOSED BAYS are indentations along the coast which enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

ENDOSULFAN shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

ESTUARIES AND COASTAL LAGOONS are waters at the mouths of streams which serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams which are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

HALOMETHANES shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

HEPTACHLOR shall mean the sum of heptachlor and heptachlor epoxide.

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

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\* See Appendix I for definition of terms.



INITIAL DILUTION is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and nonbuoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

KELP BEDS, for purposes of the bacteriological standards of this plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

MARICULTURE is the culture of plants and animals in marine waters independent of any pollution source.

MDL (Method Detection Limit) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136 Appendix B.

NATURAL LIGHT: Reduction of natural light may be determined by the Regional Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Board.

OCEAN WATERS are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

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\* See Appendix I for definition of terms.





PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

PQL (Practical Quantitation Level) is the lowest concentration of a substance which can be consistently determined within +/- 20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL\* for carcinogens is the MDL\* x 5, and for noncarcinogens is the MDL\* x 10.

SHELLFISH are organisms identified by the California Department of Health Services as shellfish for public health purposes (i.e., mussels, clams and oysters).

SIGNIFICANT difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

<u>Isomer Group</u>	<u>Toxicity Equivalence Factor</u>
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

WASTE: As used in this Plan, waste includes a discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

WATER RECLAMATION: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

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\* See Appendix I for definition of terms.



## APPENDIX II

### STANDARD MONITORING PROCEDURES

The purpose of this appendix is to provide direction to the Regional Boards on the implementation of the California Ocean Plan and to ensure the reporting of useful information. It is not feasible to cover all circumstances and conditions that could be encountered by all dischargers. Therefore, this appendix should be considered as the basic components of any discharger monitoring program. Regional Boards can deviate from the procedures required in the appendix only with the approval of the State Water Resources Control Board unless the Ocean Plan allows for the selection of alternate protocols by the Regional Boards. If no direction is given in this appendix for a specific provision of the Ocean Plan, it is within the discretion of the Regional Board to establish the monitoring requirements for the provision.

The appendix is organized in the same manner as the Ocean Plan.

#### Chapter II. A. Bacterial Standards:

For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection methods used for each analysis shall be reported with the results of the analysis.

Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.

Detection methods used for enterococcus shall be those presented in EPA publication EPA 600/4-85/076, Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Regional Board to be appropriate.

#### Chapter IV. Table B. Compliance with Table B Objectives:

Procedures, calibration techniques, and instrument/reagent specifications used to determine compliance with Table B shall conform to the requirements of federal regulations (40 CFR 136). All methods shall be specified in the monitoring requirement section of waste discharge requirements.

Where methods are not available in 40 CFR 136, the Regional Boards shall specify suitable analytical methods in waste discharge requirements. Acceptance of data should be predicated on demonstrated laboratory performance.

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\* See Appendix I for definition of terms.



The State or Regional Board may, subject to EPA approval, specify test methods which are more sensitive than those specified in 40 CFR 136. Total chlorine residual is likely to be a method detection limit effluent limitation in many cases. The limit of detection of total chlorine residual in standard test methods is less than or equal to 20 µg/l.

Monitoring for the substances in Table B shall be required periodically. For discharges less than 1 MGD (million gallons per day), the monitoring of all the Table B parameters should consist of at least one complete scan of the Table B constituents one time in the life of the waste discharge requirements. For discharges between 1 and 10 MGD, the monitoring frequency shall be at least one complete scan of the Table B substances annually. Discharges greater than 10 MGD shall be required to monitor at least semiannually.

#### Chapter IV. Compliance with Toxicity Limitations and Objectives:

Compliance with the acute toxicity limitation (TUa) in Table A shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTM), EPA, American Public Health Association, or State Board.

The Regional Board shall require the use of critical life stage toxicity tests specified in this Appendix to measure TUc. Other species or protocols will be added to the list after SWRCB review and approval. A minimum of three test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Use of critical life stage bioassay testing shall be included in waste discharge requirements as a monitoring requirement for all discharges greater than 100 MGD by January 1, 1991 at the latest. For other major dischargers, critical life stage bioassay testing shall be included as a monitoring requirement one year before the waste discharge requirement is scheduled for renewal. For major dischargers scheduled for waste discharge requirements renewal less than one year after the adoption of the toxicity objective, critical life stage bioassay testing shall be included as a monitoring requirement at the same time as the chronic toxicity effluent limits is established in the waste discharge requirements.

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\* See Appendix I for definition of terms.



The following tests shall be used to measure TUC. Other tests may be added to the list when approved by the State Board.

<u>Species</u>	<u>Effect</u>	<u>Tier</u>	<u>Reference</u>
giant kelp, <i>Macrocystis pyrifera</i>	percent germination; germ tube length	1	1,3
red abalone, <i>Haliotis rufescens</i>	abnormal shell development	1	1,3
oyster, <i>Crassostrea gigas</i> ; mussels, <i>Mytilus spp.</i>	abnormal shell development; percent survival	1	1,3
urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent normal development	1	1,3
urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent fertilization	1	1,3
shrimp, <i>Holmesimysis costata</i>	percent survival; growth	1	1,3
shrimp, <i>Mysidopsis bahia</i>	percent survival; growth; fecundity	2	2,4
topsmelt, <i>Atherinops affinis</i>	larval growth rate; percent survival	1	1,3
silversides, <i>Menidia beryllina</i>	larval growth rate; percent survival	2	2,4

The first tier test methods are the preferred toxicity tests for compliance monitoring. A Regional Board can approve the use of a second tier test method for waste discharges if first tier organisms are not available.

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\* See Appendix I for definition of terms.





### Protocol References

1. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to west coast marine and estuarine organisms. U.S. EPA Report. No. EPA/600/R-95/136.
2. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term methods for estimating the chronic toxicity of effluents and receiving water to marine and estuarine organisms. U.S. EPA Report No. EPA-600-4-91-003.
3. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.
4. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1988. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

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\* See Appendix I for definition of terms.



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